TITLE OF THE INVENTION

CAR SEAT CARRIER

FIELD OF THE INVENTION

The present invention is directed to a back-mounted device to be mounted or worn on a user's back for carrying loads. More particularly, the invention provides for a carrier for a child's car seat, when the car seat is not in use.

BACKGROUND OF THE INVENTION

The multi-million dollar child products industry is based on a simple truth: children require gear when traveling. It is not uncommon for a child to require a plurality of items even for the most mundane of outings with an adult. For example, a typical, non-exclusive, checklist of some of the essentials when traveling with a baby include: diaper bags, wipes, diaper rash cream, bibs, plastic baggies, sling or backpack, powder, shampoo/wash, lotion, pacifier, tissues, first-aid kit, clothes, hat, socks or booties, food, formula, water, juice, utensils, cups, bowls, medication, play items, stroller and blankets. Such items are, of course, substituted with others as the child ages.

A considerable burden is placed on child care providers, such as parents, educators and babysitters, when travelling with a child. More specifically, the amount of gear required when travelling with a child is heavy and burdensome for a care provider to carry. The burden, of course, is compounded when one considers the other, non-child related items a care provider must carry during trips away from home, such as grocery bags when shopping, personal travelling needs, such as clothing when on holiday, and other sundry items.

Child safety, however, is the most important concern when travelling. Thus, governments throughout the world require children to be secured in safety seats when the child is a passenger in a moving vehicle, such as a car. Many types of child safety seats exist in the art. Some are mounted onto a base in the back seat of a car. Others do not require a mounting base and may simply be attached to existing belt harnesses. Still other car seats are designed to engage with a stroller.

But regardless of the design, safety seats for children are yet another item that typically must be carried by a care provider to and from the car or when travelling. A need exists in the art, therefore, for a device that can securely carry a child's car seat when the car seat is not in use. A need also exists in the art for a device that can carry a load, thereby freeing up the hands of the care provider when accompanied by a child. Accordingly, it is the general aim of the present invention to provide for a carrier for carrying a load when travelling with a child.

SUMMARY OF THE INVENTION

In accordance with one embodiment of the present invention, a back-mounted, load-carrying apparatus is provided, comprising a base having first and second sides. Two adjustable shoulder straps and an adjustable waist belt assembly coupled to hip-load bearing elements are fixedly attached to the base. A load-restraining assembly, fixedly attached to the base is comprised of first and second adjustable straps, the first strap being adapted to secure the load with respect to a substantially vertical axis, and the second strap being adapted to secure the load with respect to a substantially horizontal axis. A strap-storage

assembly is fixedly attached to the base for reversibly securing and storing the straps when not in use.

In accordance with another embodiment of the present invention, a method for carrying an empty child's car seat is provided, comprising placing the car seat on load-bearing apparatus and then placing the load-bearing apparatus on the user's back. The load-bearing apparatus comprises a base having first and second sides, two adjustable shoulder straps fixedly attached to said base, an adjustable waist belt assembly fixedly attached to said base, hip load bearing elements coupled to said waist belt assembly, and first and second adjustable straps. The car seat is secured with respect to a substantially vertical axis using said first strap and then secured with respect to a substantially horizontal axis using said second strap. The load-bearing apparatus is placed over the shoulders of said user using said adjustable shoulder straps, after which first and second fastening elements located on said waist belt assembly are engaged.

These and other embodiments of the invention are provided in or are obvious from the following detailed description of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

In this specification and the accompanying drawings, some preferred embodiments of the invention are shown and described, and various alternatives and modifications thereof are suggested. It is to be understood that these are not intended to be exhaustive and that many other changes and modifications can be made within the scope of the invention.

The drawings herein are selected for purposes of illustration in order that others skilled in the art will more fully understand the invention and the principles thereof and will

thus be enabled to modify it in a variety of forms, each as may be best suited to the conditions of a particular use.

In the following detailed description, reference will be made to the accompanying drawings, wherein:

Figures 1 and 2 are front elevational views of an embodiment in accordance with the teachings of the present invention.

Figures 3 and 4 are rear elevational views of an embodiment in accordance with the teachings of the present invention.

Figure 5 is a view of a portion of an embodiment in Figures 2 and 3 in accordance with the teachings of the present invention.

Figure 6 is a rear elevational view of an embodiment in accordance with the teachings of the present invention.

Figures 7 and 8 are side elevational views of an embodiment in accordance with the teachings of the present invention.

Figures 9 and 10 are illustrations of an embodiment in use, in accordance with the teachings of the present invention.

DETAILED DESCRIPTION OF ILLUSTRATIVE PREFERRED EMBODIMENTS OF THE INVENTION

Reference is now made to the drawings, wherein like parts are referred to by like reference numerals throughout. Figure 1 depicts the front side of carrier 100 according to the present invention. Carrier 100 may be utilized to carry loads, using a plurality of securing and restraining straps, on the back of an individual. In a preferred embodiment, the present

invention is a carrier adapted to carry a child's car seat comfortably upon the back of an individual, preferably an adult. It is understood that the present invention is not designed to carry the car seat with the child in it.

As shown in Figures 1 and 2, carrier 100 includes base 110, two adjustable shoulder straps 111 and adjustable waist belt assembly 112. The length of shoulder straps 111 are adjusted by adjusting element 111a to accommodate users of varying size. Preferably, base 110 includes a substantially rigid frame in Figure 1, which is covered by a fabric. The rigid frame is made of any suitable material known in the art such as, for example, plastic or combinations of plastics and other materials. In a preferred embodiment, the rigid frame is a polyethylene board.

In a preferred embodiment, the rigid frame is substantially surrounded by a material that imparts, for example, moisture resistance to carrier 100 . The material is preferably made from a fabric, most preferably nylon or polyester. For example, the fabric may be a 420 denier nylon with a diamond weave; or a 1000 denier CORDURA® manufactured by DuPont. It is understood, however, that any kind of material may be used to surround the frame, for example either a natural or synthetic material, or a combination of natural and synthetic materials. In a further preferred embodiment, the material surrounding the frame, as well as any material surrounding other components of carrier 100, may also include flame retardants and soil- and stain-resistant materials, such as, for example, TEFLON®.

Waist belt assembly 112 is adjustable and is fixedly attached to base 110 via hip load-bearing elements 114, and includes securing elements 113 to secure waist belt assembly 112 around the waist of the carrier. Securing elements 113 may be a buckle, a snap-on device, hook-and-loop elements or any device that reversibly secures waist belt assembly 112 to the

wearer. Adjusting elements 113a adjust the length of waist belt assembly 112 to accommodate wearers of varying size.

Waist belt assembly 112 also includes hip load-bearing elements 114 coupled thereto. Hip load-bearing elements 114 assist, for example, in distributing the weight of the load along the body of the wearer, thereby increasing the comfort level and minimizing strain. In a preferred embodiment, any one or all of shoulder straps 111, waist belt assembly 112 and hip load-bearing elements 114 are padded, at least in part, preferably with a high-density, small-cell foam. It is understood, however, that other materials, either natural, synthetic or both, may be used as padding.

In a preferred embodiment, carrier 100 includes lower-back support element 115 and upper-back support element 116, both of which may be padded. These elements are provided on the lower and upper portions, respectively, of base 110. The material used for the padding may be the same or different than the padding material for shoulder straps 111, waist belt assembly 112 and hip load-bearing elements 114.

Turning to Figures 3 and 4, the reverse side of carrier 100 is shown, that is, the side that does not face the user when worn. The reverse side of the carrier has mounted thereon a load restraining assembly 210 that includes first strap 211 and second strap 212. First strap 211 is adapted to secure a load, such as a child's car seat, a box or other three-dimensional object, with respect to a substantially horizontal axis. Second strap 212 is adapted to secure the load with respect to a substantially vertical axis. Although securing the load relative to the substantially vertical and horizontal axes is the preferred mode, other ways of securing the load are also contemplated, such as in a criss-cross or diagonal configuration.

Each of said first strap 211 and second strap 212 includes first and second ends 213 and 214, respectively. First end 213 includes fastening element 213a and second end 214 includes fastening element 214a. Further, each of said first strap 211 and second strap 212 includes first and second adjusting elements 213b and 214b, respectively. Elements 213a and 214a are designed to reversibly engage each other to unite first end 213 and second end 214. Elements 213a and 214a include, but are not limited to, buckles, snap-on devices or a hook and loop elements. It is envisioned that other ways of uniting elements 213a and 214a may also be used. Adjusting elements 213b and 214b are designed to adjust the length of straps 211 and 212 to accommodate loads of varying sizes.

Also shown in Figures 3 and 4, and in more detail in Figures 5 and 6, is strap storage assembly 215. Strap storage assembly 215 is designed to store and secure first strap 211 and second strap 212 when not in use. Strap storage assembly 215 includes a plurality of straps 216 which surround and reversibly secure first strap 211 and second strap 212 using hook and loop elements 217. An example of a hook and loop element is VELCRO®.

Figures 6, 7 and 8 show how carrier 100 is stored when not in use. Straps 216 and elements 217 store first strap 211 and second strap 212 in generally vertical and horizontal directions when carrier 100 is not in use. Other directions for storing first strap 211 and second strap 212 are also envisioned, such as criss-cross or diagonal directions.

Figures 9 and 10 are illustrations of individuals wearing carrier 100. As seen in Figures 9 and 10, straps 111 are adapted to be worn on the shoulders of the wearer. Securing elements 113 are engaged to reversibly secure waist belt assembly 112 around the waist of the wearer. Further, load-bearing elements 114 are adapted to distribute the weight of the load along the body of the wearer.

As seen in Figure 10, a child's empty car seat is secured onto carrier 100 with respect to a substantially horizontal axis by strap 211, and in a substantially vertical axis by strap 212. More specifically, in order to load carrier 100 with, for example, a child's car seat, carrier 100 is first placed on a generally flat surface. Elements 217 are disengaged from one another and straps 216 are pulled away, thereby releasing first strap 211 and second strap 212 from a folded position in strap storage assembly 215. The child's car seat is then placed in the middle of carrier 100. Elements 213a are united to each other in order to extend first strap 211 onto the car seat in a generally vertical direction. Elements 214a are then united to each other in order to extend second strap 212 onto the car seat in a generally horizontal direction. It is understood, however, that the car seat could be secured in a generally horizontal direction first, followed by securing the car seat in a generally vertical direction. The length of straps 211 and 212 are thereafter adjusted using adjusting elements 213b and 214b in order to accommodate the dimension of the car seat.

With the car seat so secured onto carrier 100, carrier 100 is subsequently donned by the wearer. More specifically, the wearer places both arms through shoulder straps 111 and adjusts carrier 100 to a comfortable position on the wearer's back. Securing elements 113 are then engaged to secure waist belt assembly 112 around the waist of the wearer.

In order to remove the car seat from carrier 100 and, subsequently, store carrier 100, the above process is reversed. For example, securing elements 113 are disengaged and carrier 100 is slipped off the back of the wearer. Carrier 100 is then placed on a generally flat surface. Elements 213a and 214a are disengaged, freeing the car seat from straps 211 and 212. The car seat is then removed. For storing carrier 100, straps 211 and 212 are first

folded, as shown in Figure 6. Straps 216 are then placed over straps 211 and 212 and elements 217 are engaged, as seen in Figure 7.

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Although preferred embodiments of the present invention and modifications thereof have been described in detail herein, it is to be understood that this invention is not limited to those precise embodiments and modifications, and that other modifications and variations may be affected by one skilled in the art without departing from the spirit and scope of the invention as defined by the appended claims.